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| Year 9DIG assessment  Project -Digital Solution  July 2023 Unit 1 – Website developmentAchievement Standard [By the end of Year 10, students explain the control and management of networked digital systems and the security implications of the interaction between hardware, software and users. They explain simple data compression, and why content data are separated from presentation.  Students plan and manage digital projects using an iterative approach. They define and decompose complex problems in terms of functional and non-functional requirements. Students design and evaluate user experiences and algorithms. They design and implement modular programs, including an object-oriented program, using algorithms and data structures involving modular functions that reflect the relationships of real-world data and data entities. They take account of privacy and security requirements when selecting and validating data. Students test and predict results and implement digital solutions. They share and collaborate online, establishing protocols for the use transmission and maintenance of data and projects] |

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| G:\Coredata\Common\Logos + Visual Style Guide\Logos\Full Logo + Brand\Logo - Badge Only\JPG\B-W Logo-Bagde.jpg | Albany Creek State High School | |
| Student name: James Tuppen | Student number: |
| Teacher name: Ms Swan | |
| Date handed out: 20 July | Draft Due: 31 July  Date Due: 4 September  Submission: 7 September |

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| Subject | Digital Technologies |
| Technique | Project: Digital Solution |
| Unit | Unit 1 |
| Topic | Web Development |

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| Conditions | | | |
| Duration | Class and home time to complete assessment | | |
| Mode | Multi-modal | Length | Written Component: Technical Proposal  Digital component: Minimum of 5 html pages and 1 CSS page.  Video Evaluation 60-90 seconds |
| Individual/ group | Individual | Other | A4 pages - evaluation and bibliography |
| Resources available | Computers, internet, software (Notepad++, MS Word), stimulus with technical proposal and parameters. | | |
| Context | | | |
| This unit explores the digital requirements in order to develop a website showcasing an innovation which will create change. The students will be led through a process which enables them to understand how to undertake a project which requires a digital solution to a problem. | | | |
| Task | | | |
| Develop a website showcasing an innovation which will create change to be entered into the 2023 Premier’s Coding Challenge. Document the problem- solving process used to create this website as a digital solution. | | | |
| To complete this task, you must: | | | |
| Plan and manage digital projects using an iterative approach (EDGE)  **Define and decompose** complex problems with respect to website development in terms of functional and non-functional requirements. **Explain** the security implications of the interaction between hardware, software and users  **Design and evaluate** user experiences for the website created  Consider privacy and security arrangements when **selecting and validating** data.  **Test and predict** results and **implement** digital solutions | | | |
| Stimulus | | | |
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| Checkpoints | | |
| Term3, Week 2: Lesson 3 (20 July): Assessment Issued | | |
| Term 3, Week 4: Lesson 1 (31 August): Draft due (Technical Proposal) | | |
| Term 3, Week 9: Lesson 1 (4 September): Assessment due – Technical Proposal, website and video evaluation | | |
| Assessable elements | | |
| Knowledge and Understanding | Processes and Production skills | Communication |
| **Feedback** | | |
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| Authentication strategies  . | | |
| * You will be provided class time for task completion. | | |
| * A unique response will be created by ensuring each student has an individualised website design | | |
| * You will provide documentation of your progress at indicated checkpoints. | | |
| * Your teacher will collect copies of your response and monitor at key junctures. | | |
| * Your teacher will conduct interviews or consultations as you develop the response. | | |
| * You must acknowledge all sources. | | |
| * Your teacher will ensure class cross-marking occurs. | | |
| Scaffolding | | |
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**Specifications**

You will design and create a web site that will align with the theme for the 2023 Premier’s Coding Challenge which is #digitalinnovationsqld.

Students are aware of the challenges that they face each and every day and the ones which are impacting on their lives and others. They are living in a world where technologies enrich and impact on the lives of people and societies globally.

You are to create change by examining real-world problems and responding with an innovative digital solution by developing a website to create change in your local community or beyond.

Choose from one of the topics below or come up with one yourself:

* making everyday activities easier
* being safe online
* healthy living
* cultural awareness and inclusion
* supporting an ageing population
* social justice awareness
* preserving, revitalising and supporting local language
* transportation
* reducing organic waste
* creating a sustainable future.

I have chosen “being safe online”.

**Website Requirements**

The website will have a ***minimum*** of five pages including a ‘home’ page and a ‘contact’ page. Pages *must* be relevant.

The website must contain:

* Properly aligned text and images, using appropriate methods, catering for different screen sizes and resolutions, within reason, for your target audience.
* Appropriate fonts, colours, backgrounds, buttons, menus etc. for your target audience.
* Last updated notification.
* Appropriate images – including acknowledgement of their source.
* Accurate and **original** text (minimum of 300 words) grammatically correct and appropriate.
* All pages must link to the Home page.
* At least 4 different CSS style elements
* At least three links to suitable external pages where more information of the topic can be located.
* At least two links *within* a page (one to the top of the page, and one to another page in the website).
* An email link which will link to your school email account.

# Technical Proposal

The technical proposal will be made up of three sections; a description of the topic and the problem you will solve, a discussion on how you intend to layout your web page, and a graphical representation of each page.

## Topic

After you have selected an appropriate topic, you need to write about its requirements:

* In the first paragraph write a description of the topic you have chosen
* In the second paragraph outline the problem (eg raise awareness of inclusiveness and accessibility in entertainment) and how you will solve it
* In the third paragraph identify the functional and non-functional requirements of the website eg. prominent colours, images, styling, links for the website

The topic I have chosen is “being safe online”. This topic can include many sub-topics, such as social media, malware, spyware, privacy, scams, advertising, VPNs and more. The internet has so much content on it, and so much *of* that content is malicious. The reason malicious content exists in the first place is to target other users on the internet. This content either harms the target user, or gets something from them, such as money, passwords or personal info. And the reason this malicious content still exists is because it works! Many users fall for scams, skim over the terms and conditions or believe something they shouldn’t have. I believe the best way to protect people against this isn’t to have a good antivirus or adblocker, but to be educated at how to deal with malware. Best case scenario, the person learns the signs of something being malicious and doesn’t interact with it in the first place.

The primary purpose of the site is to educate the visitors, which would make you think a basic, to the point UI would be best. But this website needs to appeal to my target audience, which is people of all ages. After seeing the attention span of most teens, I can be certain that they aren’t going to read text unless it’s something with a bit more imagery and colour. So I’m going to try a balance, with colour on buttons, images, animations, and maybe some interactive parts, too. Also, this will need to support tiny screens such as the phones these teenagers will undoubtedly be using. This means responsive text and element sizing.

But let’s not forget the other end of my target audience, the elderly. Some elderly people may not have the same web-browsing skills as others, so the website needs to be easy to navigate, and informative. Plus this has to run on gramp’s browser, which probably doesn’t have awesome CSS support.

So to summarise, my website need functional components, such as clear, informative text and easy means of navigation, while having eye-catching images and animations. Ideally, it would also have an interactive component such as a quiz to test reader’s knowledge.

## Layout

In the layout section you need to write a paragraph about why you are going to use an external CSS sheet in your web page design outlining the benefits of doing so.

You also need to include a table of what content each of your web pages will contain. This information can be listed as dot points. Example is below:

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| **Web Page** | **Content** |
| Homepage | * Banner * Navigation Bar * Title * Main Image * Event description |

## Wireframes

In this section you will include planning sketches of what each web page will look like. You need 1 sketch for each web page. You are to label each element and annotate the style attributes including details such as colour, size, font, alignment, etc. An example is below:

Homepage

Nav buttons

20% width

15% height

Blue background

White text

Arial font

Left aligned

Banner

100% width

15% height

Space invader background image

Title

Comic Sans font

Large font

Centered

Red text

Background

White background

Koala background image at 15% opacity

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| Banner | |
| Nav. button | **TITLE**  Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Maecenas porttitor congue massa. Fusce posuere, magna sed pulvinar ultricies, purus lectus malesuada |
| Nav. button |
| Nav. button |
| Nav. button |
| Nav. button |
| Nav. button |

## Evaluation Video

You are to film a 60-90 second video evaluation of your website. The video you should include:

* A brief overview of your topic
* Discuss how the project went in terms of:
  + Innovation were you innovative when developing your website, is it visually appealing, complexity of HTML and CSS)
  + Sustainability (will the website be on ongoing sustainable resource for your chosen topic, did you make good use of your human and physical resources?) and
  + Risk (how did you keep your work safe from potential risks)
* Detail any obstacles you encountered in the planning and development phases, and how you overcame or worked around the problem.
* Summarise the results of the peer testing and state to what degree you succeeded in completing the overall task.
* Also make a statement as to what you would change if you were to make a version 2 of the website.

Video Requirements:

* The video should be no more than 120MB in size.
* Keep a high-resolution version of the video that can be used if selected as a winner.
* Recommended format for video files are: MPG, AVI, MOV and MP4

# Digital Project Criteria.

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|  | | | The folio of a student’s work has the following characteristics: | | | | | | | | | |
| Processes and production skills | Investigating and defining | Purposeful definition and decomposition of complex problems in terms of functional and non‑functional requirements  *Technical Proposal – ‘Topic’* | | Effective definition and decomposition of complex problems in terms of functional and non‑functional requirements | | Definition and decomposition of complex problems in terms of functional and non‑functional requirements | | Partial definition and decomposition of complex problems in terms of functional and non‑functional requirements | | Fragmented definition and decomposition of problems | |  |
| Generating and designing;  producing and implementing | Purposeful design and evaluation of user experiences  *Technical Proposal – Layout and Wireframes* | | Effective design and evaluation of user experiences | | Design and evaluation of user experiences | | Partial design and explanation of user experiences | | Fragmented design and statements about user experiences | |  |
| Systematic testing and prediction of results and proficient implementation of digital solutions  *Website functionality eg links* | | Reliable testing and prediction of results and effective implementation of digital solutions | | Testing and prediction of results and implementation of digital solutions | | Partial testing and prediction of results and partial implementation of digital solutions | | Fragmented testing and prediction of results or fragmented implementation of digital solutions | |  |
| Evaluating | Discerning evaluation of information systems and their solutions in terms of potential for innovation and enterprise  *Video Evaluation* | | Informed evaluation of information systems and their solutions in terms of potential for innovation and enterprise | | Evaluation of information systems and their solutions in terms potential for innovation and enterprise | | Explanation of information systems and their solutions | | Description of information systems and their solutions | |  |
| Collaborating and managing | Comprehensive planning and management of digital projects using an iterative approach  *Website overall appearance & content* | | Informed planning and management of digital projects using an iterative approach | | Planning and management of digital projects using an iterative approach | | Partial planning and management of digital projects using an iterative approach | | Fragmented planning and management of digital projects | |  |